

XVI. *Notes on the Orthopterous family Mecopodidæ.*

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[Read July 1st, 1891.]

THE small family *Mecopodidæ* forms a very natural group among the *Phasgonuridæ*, or grasshoppers with long antennæ, which are usually, but improperly, called *Locustidæ* by entomologists, as the name *Locustidæ* should certainly be retained for the large migratory species with short antennæ, of which *Locusta migratoria*, L., is the type.

The *Mecopodidæ* are inhabitants of the warmer parts of Asia and Africa, and may easily be recognised by a few salient characters:—

Prosternum bispinose.

All the tibiæ with terminal spines above on each side.

Front tibiæ with open foramina on each side.

Tarsi with the joints broad, depressed and laterally carinated.

Hind legs very long.

Karsch has published a synopsis of the family in Berl. Ent. Zeitschr., xxx., pp. 107—118), which may be consulted with advantage.

Genus I. MACROLYRISTES.

Vollenhoven, Tijdschr. Ent., viii., p. 106 (1865).

1. *Macrolyristes imperator*.

Vollenhoven (nec Walker), l. c., p. 108, pl. vii. (1865)

Hab. Java, Borneo. B. M.

A very large and handsome species, with strongly serrated lateral borders to the pronotum.

Genus II. MECOPODA.

Serville, Hist. Nat. Ins. Orth., p. 532 (1839).

LUCERA, Walk., Cat. Derm. Salt. B. M., ii., p. 265 (1869), *immature*.

2. *Mecopoda elongata*.

Gryllus elongatus, Linn., Syst. Nat., i., p. 429, n. 26 (1758): Mus. Ulr., p. 127 (1764).

Mecopoda elongata, Walk., Cat. Derm. Salt., iii., p. 457, n. 1 (1870).

M. rufa, Walk., l. c., p. 458, n. 3 (1870), *nec* Stoll.

Decticus pallidus, Walk., l. c., ii., p. 262, n. 34 (1869), *immature*.

D. tenebrosus, Walk., l. c., p. 263, n. 35 (1869).

Lucera bicoloripes, Walk., l. c., p. 265, n. 1 (1869), *immature*.

Hab. India, China (north to the Corea), Ceylon, Philippines, Borneo, &c. B. M.

A very common and widely distributed species. The full synonymy is given by Walker (iii., p. 457), and is therefore not here repeated. Walker's *Mecopoda rufa* appears to be only a bleached specimen of *M. elongata*. He quotes (doubtfully, it is true) a figure of Stoll's (Saut. et Grill., pl. 9, f. 37), which does not appear to me to belong to the *Mecopodidae* at all.

3. *Mecopoda cyrtoscelis*.

Karsch, Ent. Nachr., xiv., p. 146 (1888).

Hab. "Segaar Bay" (Karsch).

4. *Mecopoda lamellata*.

Gryllus lamellata, Linn., Syst. Nat., i., p. 429, n. 29 (1758).

Gryllus lamellosus, Linn., Mus. Ulr., p. 128 (1764).

Mecopoda lamellosa, Stål, Rec. Orth., ii., p. 48 (1874).

Hab. Sierra Leone. B. M.

There is only a single male in the British Museum collection, which appears to agree with Stål's description, though whether it is identical with the Linnean

species may be open to question. In the absence of a series of *M. lamellata* it is better to regard *M. latipennis*, Burm., as provisionally distinct.

5. *Mecopoda latipennis*.

Burm., Handb. Ent., ii., p. 686, n. 2 (1839).

Hab. Natal. B. M.

All the specimens in the British Museum are rather larger than Burmeister's type. The male has green or brown tegmina; the female has brown tegmina, with a longitudinal row of black spots, bordered outside with white, and followed by some detached whitish markings.

6. *Mecopoda frontalis*.

Mecopoda frontalis, Walk., Cat. Derm. Salt., v., p. 48 (1871).

M. monrovia, Karsch, Berl. Ent. Zeitschr., xxx., p. 112, pl. iii., fig. 4 (1886).

Hab. Monrovia (*Karsch*); Sierra Leone. B. M.

A very dark-coloured species.

7. *Mecopoda walkeri*, sp. n.

Mecopoda imperator, Walk., Cat. Derm. Salt., iii., p. 458, n. 4 (1874).

Hab. Philippines. B. M.

A true *Mecopoda*, but with broader tegmina than the other species. It has nothing to do with the genus *Macrolyristes*.

8. *Mecopoda platyphæa*.

Walk., Cat. Derm. Salt., iii., p. 458, n. 5 (1870).

Hab. Ceylon. B. M.

One pair. The tegmina are green in the male, and brown in the female.

9. *Mecopoda karschi*, sp. n.

Male. Dark chocolate-brown, indistinctly mottled with paler and darker. Head with pale carinæ in front of and between the eyes; behind these are two pale spots adjoining each eye, the

hindermost reaching the occiput. A large reddish frontal ocellus on the face between the lower borders of the eyes. Antennæ chocolate-brown towards the base, black beyond, with pale rings at more or less regular intervals. Pronotum chocolate-brown, rugose-punctate, with two rather deep incisions on each side, the lateral carinæ bordered with pale, especially in front. Tegmina brown, with one or two pale blotches about the middle, and some small scattered pale dots. Wings fusco-hyaline, marked with brown at the tips. Legs varied with rufous-brown, femora darker. Four front femora unarmed, their tibiæ with very fine spines; hind femora strongly thickened, with some small spines at the base above. Six spines on the outside; those on the inside rather larger, and more numerous, extending further towards the base. Cerei thick, curved inwards, nearly as long as the subgenital plate, which is triangularly emarginate at the extremity. Long. corp. 25 millim.; al. ant. long. 40; lat. 10; al. post. long. 39; lat. 17 millim.; fem. post. 43 millim.; tib. post. 38 millim.

Hab. Queensland. B. M.

A small species, with rather long, narrow, and pointed wings and tegmina.

10. *Mecopoda regina*, sp. n.

Female. Brown; head behind the eyes above, and below them, pale; pronotum deeply incised on each side, and its front lobe with a slight additional indentation on each side. Hind lobe almost rectangular at the sides, and slightly bordered with paler. Antennæ blackish, with pale rings at regular intervals, those towards the base narrowest. Tegmina brown, irregularly varied with pale grey, rather narrow towards the base, wider beyond the middle, the apex somewhat pointed. Wings rather narrow, fusco-hyaline. Front legs wanting; middle femora unarmed; middle tibiæ with two rows of small spines beneath, and a single row on the upper surface. Hind femora much thickened at the base, with several strong yellowish tubercles above, on and within the central carina; beneath, an outward row of small tubercles, and an inner row of short spines. Hind tibiæ with a double row of short strong spines on the upper surface, and a few small ones at long intervals beneath, on the hinder two-thirds of the tibiæ. Long. corp. cum ovipos. 59 millim.; ovip. 23; al. ant. long. 65; lat. 16; al. post. long. 63; lat. 28; fem. post. 56 millim.; tib. post. 55 millim.

Hab. Duke of York Island. B. M.

Much resembles the description of *M. cyrtoscelis*,

Karsch ; but, apart from the difference in locality, the latter appears to be a larger and much more strongly spined insect.

Genus III. PACHYSMOPODA.

Karsch, Berl. Ent. Zeitschr., xxx., p. 108 (1886).

11. *Pachysmopoda abbreviata*.

Mecopoda abbreviata, Taschenberg, Zeitschr. f. Naturw., lvi., p. 184 (1883).

M. (Pachysmopoda) abbreviata, Karsch, Berl. Ent. Zeitschr., xxx., p. 114, pl. iv., f. 2 (1886).

Hab. Socotra. B. M.

Genus IV. EUTHYPODA.

Karsch, Berl. Ent. Zeitschr., xxx., p. 108 (1886).

MACROSCIRTUS, Pictet, Mém. Soc. Gênéve, xxx. (6), p. 13 (1888).

12. *Euthypoda acutipennis*.

Mecopoda (Euthypoda) acutipennis, Karsch, Berl. Ent. Zeitschr., xxx., p. 116, pl. iv., f. 3 (1886).

Hab. Chinchoxa.

13. *Euthypoda kangaroo*.

Macroscirtus kangaroo, Pictet, Mém. Soc. Gênéve, xxx., p. 14, pl. ii., f. 38, 38a (1888).

Hab. Gaboon (*Pictet*) ; Ashanti. B. M.

14. *Euthypoda granulosa*.

Mecopoda (Euthypoda) granulosa, Karsch, Ent. Nachr., xii., p. 317 (1886).

Hab. West Africa, between Kuako and Kimpoko.

15. *Euthypoda inalata*.

Mecopoda (Euthypoda) inalata, Karsch, Berl. Ent. Zeitschr., xxx., p. 117 (1886).

Hab. Chinchoxo ; and between Kuako and Kimpoko.

16. *Euthypoda unguiculata*.

Mecopoda (*Euthypoda*) *unguiculata*, Karsch, Ent. Nachr., xiv., p. 147 (1888).

Hab. Usambara.

Genus V. VETRALIA.

Walk., Cat. Derm. Salt., ii., p. 391 (1869).

17. *Vetralia quadrata*.

Vetralia quadrata, Walk., Cat. Derm. Salt., ii., p. 392, n. 1 (1869).

Mecopoda (*Euthypoda*) *difformis*, Karsch, Berl. Ent. Zeitschr., xxx., p. 115, pl. iv., f. 1 (1886).

Hab. Ceylon. B. M.

Genus VI. ACRIDOXENA.

ACRIDOXENA, White, Proc. R. Phys. Soc. Edinb., iii., p. 309 (1865).

|| STALIA, Scudd., Proc. Bost. Soc. N. H., xvii., p. 454 (1875).

EUSTALIA, Scudd., l. c., xx., p. 95 (1879).

18. *Acridoxena hewaniana*.

Acridoxena hewaniana, Smith, Proc. R. Phys. Soc. Edinb., iii., p. 310 (1865).

Stalia foliata, Scudd., Proc. Bost. Soc. N. H., xvii., pp. 456, 457, figs. (1875).

Eustalia foliata, Scudd., l. c., xx., p. 95 (1879); Karsch, Ent. Nachr., xii., pp. 145—147, fig. (1886).

Hab. Gaboon (*Karsch*) ; Old Calabar. B. M.

A very remarkable species, with leaf-like expansions of the front femora and tibiae, and broad tegmina, emarginate at the apex.

Genus VII. CORYCUS.

Sauss., Ann. Soc. Ent. France (4), i., p. 487 (1861).

19. *Corycus jurinei*.

Sauss., Ann. Soc. Ent. France (4), i., p. 489, pl. xi., f. 4—7 (1861); Karsch, Berl. Ent. Zeitschr., xxxii., p. 415, fig. (1888).

Hab. Cameroons.

Allied to *Acridoxena*.

Genus VIII. PHYRAMA.

Karsch, Berl. Ent. Zeitschr., xxxii., p. 416 (1888).

20. *Phyrama interjectum*.

Karsch, Berl. Ent. Zeitschr., xxxii., p. 417, pl. 1, f. 1, 1 a—d (1888).

Hab. South Central Madagascar.

A species of doubtful location, having characters in common with the *Prockilidæ* and *Mecopodidæ*.

Genus IX. MOSSULA.

Walk., Cat. Derm. Salt., ii., p. 288 (1869).

This genus has an extraordinary resemblance to *Salomona*, Blanch., among the typical *Phasgonuridæ*, in size, shape, the short frontal horn, and even in the neuration, which is more complicated than in *Mecopoda*, and the anterior and posterior radials of the tegmina are completely separated from their origin, running almost parallel throughout, and only slightly diverging at their extremities. But the open foramina, long hind legs, &c., show the real affinities of the genus to be with the *Mecopodidæ*.

21. *Mossula vitticollis*.

Walk., Cat. Derm. Salt., ii., p. 288 (1869).

Hab.—?. B. M.

22. *Mossula Salomonis*, sp. n.

Male and female. Robust, tawny, face varied with whitish, the extremity of the scape, and at least the base of the second joint of the antennæ, black beneath; vertex concave, narrowed in front, and produced between the antennæ into a short spine. Pronotum with two transverse constrictions, the middle lobe with two depressions, starting from a short stem behind, and diverging in

front. Tegmina about as long as the body, subparallel, obtusely rounded at the extremities; testaceous, slightly marked with black between the nervures at the base; speculum of the male oval, very clear hyaline, and surmounted by a clear vitreous space, extending beyond the speculum at each end, and curving downwards opposite to it on the basal side. Wings nearly as long as the tegmina, semicircular, fusco-hyaline. Front femora with 6 spines on the inner carina; front tibiæ with 9—11 spines on each carina; intermediate femora with one row of 6 or 7 spines beneath, and intermediate tibiæ with about 12 pairs of small spines; hind femora thickened at the base, with 8—13 spines on each side; hind tibiæ with about 20 spines on each of the upper carinæ; those on the two lower carinæ rather less numerous. Cerci short, subgenital plate of male with two long-jointed hairy processes; ovipositor of female hardly curved, about as long as the abdomen.

Dimensions.—♂. Long. corp. 45 millim.; long. ant. circa 210; al. ant. long. 41; lat. 14; al. post. long. 38; lat. 29; fem. post. 42; tib. post. 40 millim.

♀. Long. corp. cum ovip. 90—100 millim.; long. ant. circa 220; ovip. 37—39; al. ant. long. 52—60; lat. 13—16; al. post. 48—55; lat. 37—40; fem. post. 44—50; tib. post. 41—43 millim.

Hab. Solomon Islands. B. M.

A much larger and more robust species than *M. vitticollis*, and with no black markings on the pronotum. Described from one male and five females.